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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT.
NOVAYA ZEMLYA, 23 AUGUST 1975

J. R. Woolson, et al

Teledyne Geotech

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SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
Novaya Zemlya, 23 August 1975

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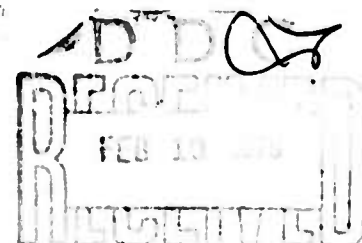
December 1975

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SDCS Event Report No. 34

Novaya Zemlya, 23 August 1975

This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Latitude	Longitude	m_b	M_s
NORSAR	09:04:36.4	08:59:55	73 N	056 E	5.8	N/A
Hagfors	09:04:34.0	09:00:21	74 N	046 E	5.4	N/A

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

08:59:58.6 73.1N 054.7E 6.3 4.5

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. Horizontal SP channels at all SDCS stations were rotated. The NORSAR short-period waveforms were not recoverable, P arrival obtained from weekly summary.

Long-period signals were recorded at WH2YK, HN-ME, FN-WV, CPSO, ALPA and NORSAR. Horizontal LP channels at all SDCS stations, except HN-ME, were rotated. Horizontal LP channels at HN-ME were not rotated due to unknown operating gains. The long-period system at RK-ON was inoperative due to maintenance. LASA long-period array data were not recoverable.

Details of the program used to obtain beamed vertical, radial and transverse long-period data at ALPA are in the process of being reviewed. The vertical beam is probably valid; horizontal beams are questionable.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

ADDITIONAL INFO

HTB	DATE
CC	TIME
REMARKS	
101	
BY	
A	

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SECS	ELEVATION METERS	INSTRUMENTATION	
				SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6430 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000	KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	18300	SL210 V SL220 H
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be 316° + 5° based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 23 AUG 75
09:00:00.0 73.001N 54.000E 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CAIC	REST	REST	REST
NAC	09 04 36.4	0.0	-0.0	20.4	256.4
WH2YK	09 08 24.7	-0.2	-0.2	46.4	6.6
RK-CN	09 09 25.5	-0.7	-0.8	54.5	335.9
HN-ME	09 09 28.4	0.2	0.2	54.7	314.2
LAC	09 10 05.2	1.1	1.1	59.8	344.9
FN-WV	09 10 35.2	0.5	0.6	64.3	321.4
CPO	09 10 59.2	-0.9	-0.7	68.3	325.9

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LCNG.	DEPTH (KM)	SDV	IT	STA
08:59:54.1	73.218N	54.403E	-37. CAIC	0.7	4	7
08:59:58.6	73.062N	54.697E	0. REST	0.7	2	7

CAIC				REST			
2	.	1		2	.	1	
3	.		0	3	.		0
0	0.	0	0	0	0.	0	0
.
0	1.	0	0	0	1.	0	0
0	.		0	0	.		0
0	.	0		0	.	0	

CHI2 COVERAGE ELLIPSE: 95 PER CENT CONF..LEVEL, SDV= 1.16
MAJOR 169.9KM. MINOR 26.3KM. AZ= 136 AREA= 14030 SQ.KM. REST

-4-

DATA SUMMARY

INPUT FOR EVENT 23 AUG 75
09:00:00.0 73.001N 54.000E OKM.

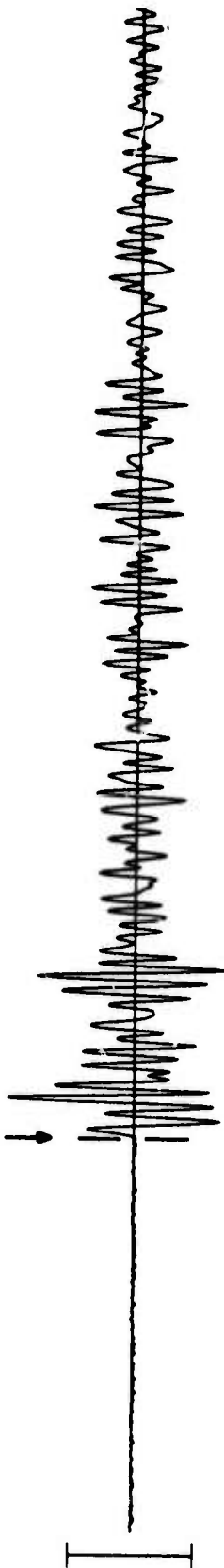
STA.	PHASE	ARRIVAL TIME	INST	PER	A/T	MAGNITUDE MB MS	DIR	DIST
NAC	EP	09 04 36.4	AB	0.8	896.	5.70		20.4
NAC	LR	09 15 04.0	LAB	15.0	1705.	5.66		20.4
AIPA	LQ	09 20 38.0	IAB	24.0	19.			
AIPA	LR	09 26 05.0	LAB	18.0	26.	4.15		41.2
WH2YK	EP	09 08 24.7	SPZ	0.5	287.	5.99		46.4
WH2YK	LQ	09 23 55.0	IPT	27.0	21.			
WH2YK	LR	09 31 30.0	LPZ	18.0	27.	4.25		46.4
FK-CN	EP	09 09 25.5	SPZ	0.7	CLIPPED			
HN-ME	EP	09 09 28.4	SPZ	0.9	1123.	6.55		54.7
HN-ME	LR	09 35 18.0	LPZ	17.0	93.	4.83		54.7
IAC	EP	09 10 05.2	SPZ	1.1	1089.	6.54		59.8
FN-WV	EP	09 10 35.2	SPZ	0.9	629.	6.50		64.3
FN-WV	LQ	09 33 57.0	LPT	27.0	31.			
FN-WV	LR	09 39 45.0	LPZ	18.0	59.	4.70		64.3
CFC	EP	09 10 59.2	SPZ	0.8	CLIPPED			
CFC	LQ	09 38 41.0	IFT	20.0	27.			
CFC	LR	09 42 29.0	LPZ	20.0	58.	4.72		68.3

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	IPMAG	LPSDV	LPSTA
08:59:54.1	73.218N	54.403E	0. CAIC	6.25	0.39	5	4.53	0.3	5
08:59:58.6	73.062N	54.697E	0. REST	6.26	0.39	5	4.53	0.3	5

WH2YK 23 AUG 75

08:08:24.7

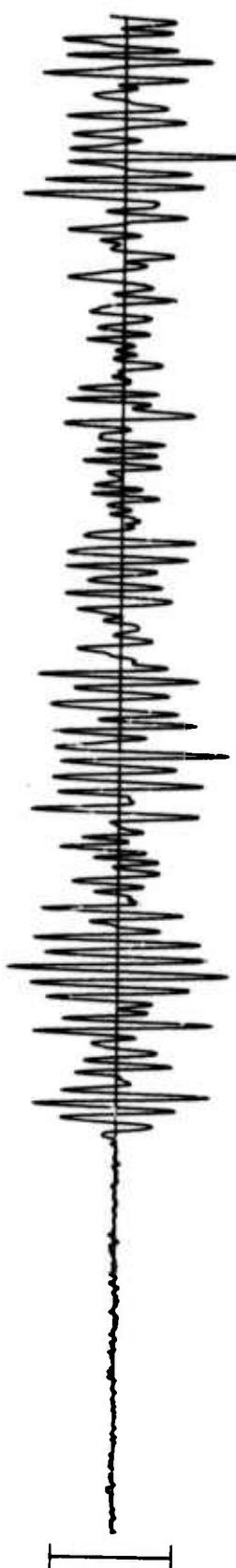
SPZ
303.40 MHz



SPR
182.88 MHz



SPT
131.13 MHz



TIME

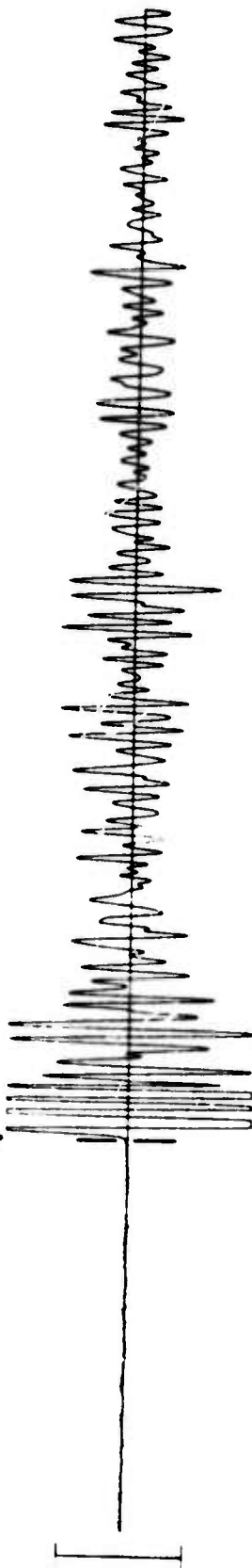


08:08:00

RK- ON 23 AUG 75

09:09:25.5

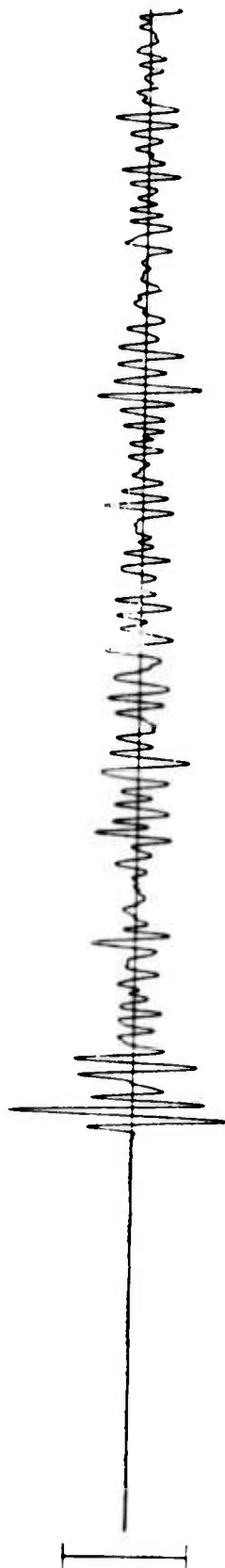
SPZ
581.24 MHz



SPR
828.55 MHz



SPT
654.03 MHz



TIME

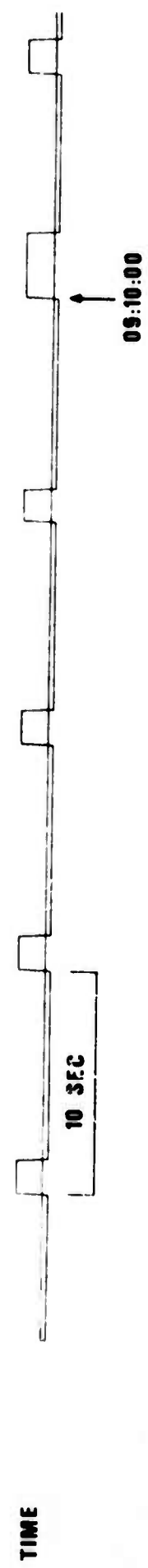
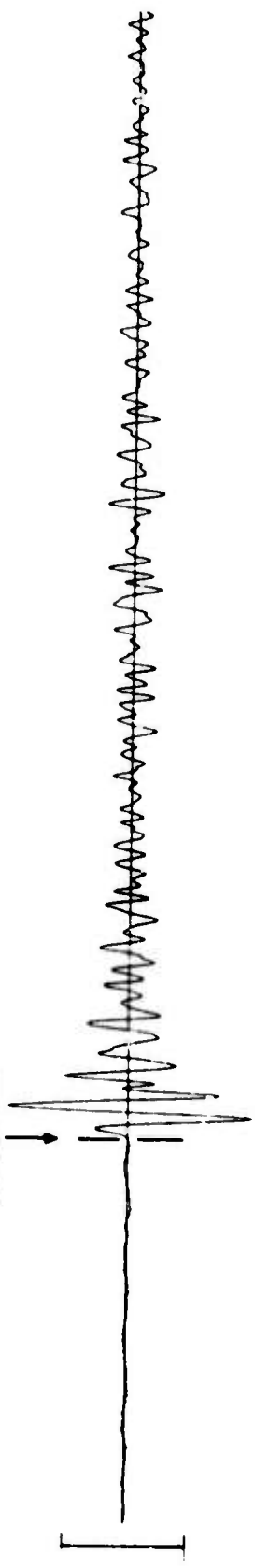


10 SEC

09:10:00

HN-ME 23 AUG 75

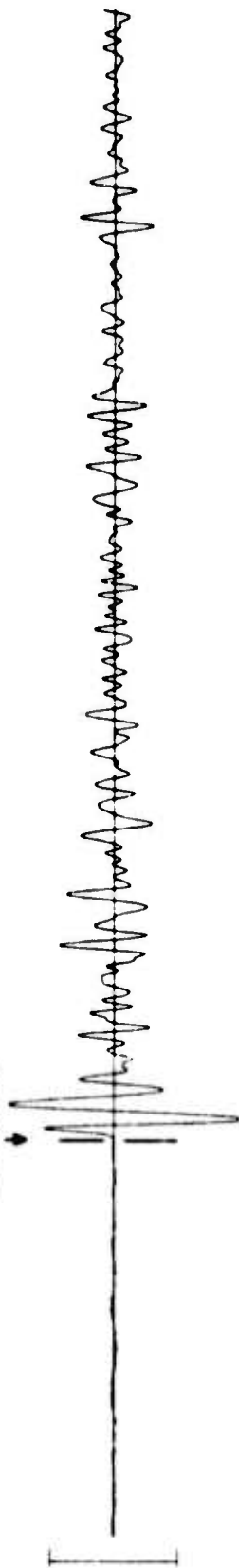
09:09:28.4



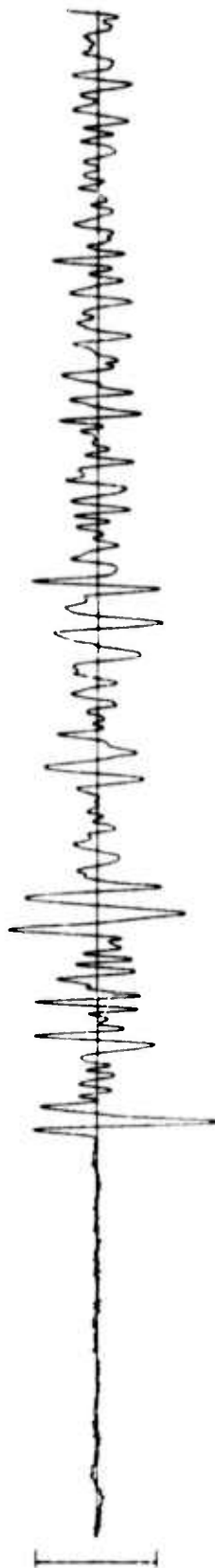
FN-WV 23 AUG 75

09:10:35.2

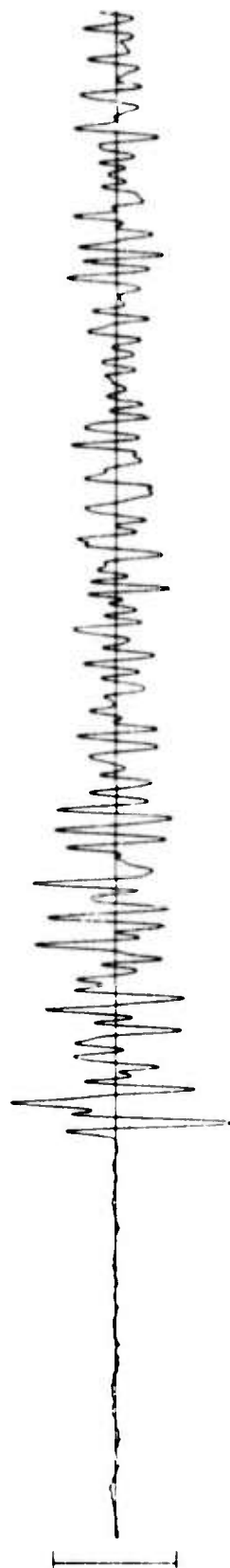
SPZ
401.66 Mμ



SPR
189.10 Mμ



SPT
124.48 Mμ



TIME

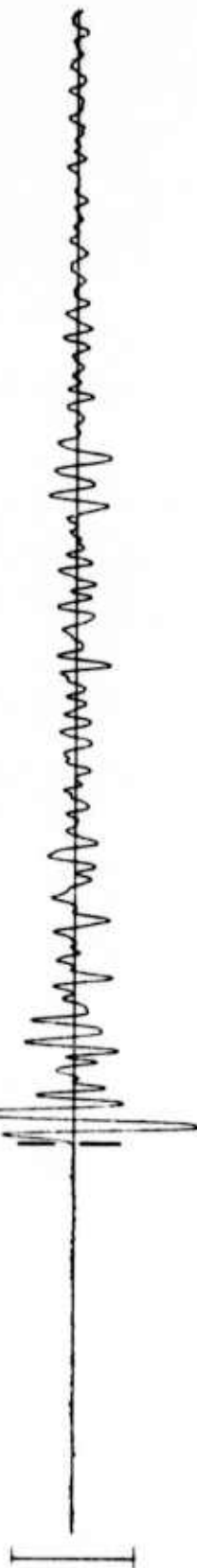
10 SEC

09:11:00

CP-S0 23 AUG 75

09:10:59.2

SPZ
848.11 MHz



SPR
247.38 MHz



SPT
113.30 MHz



TIME

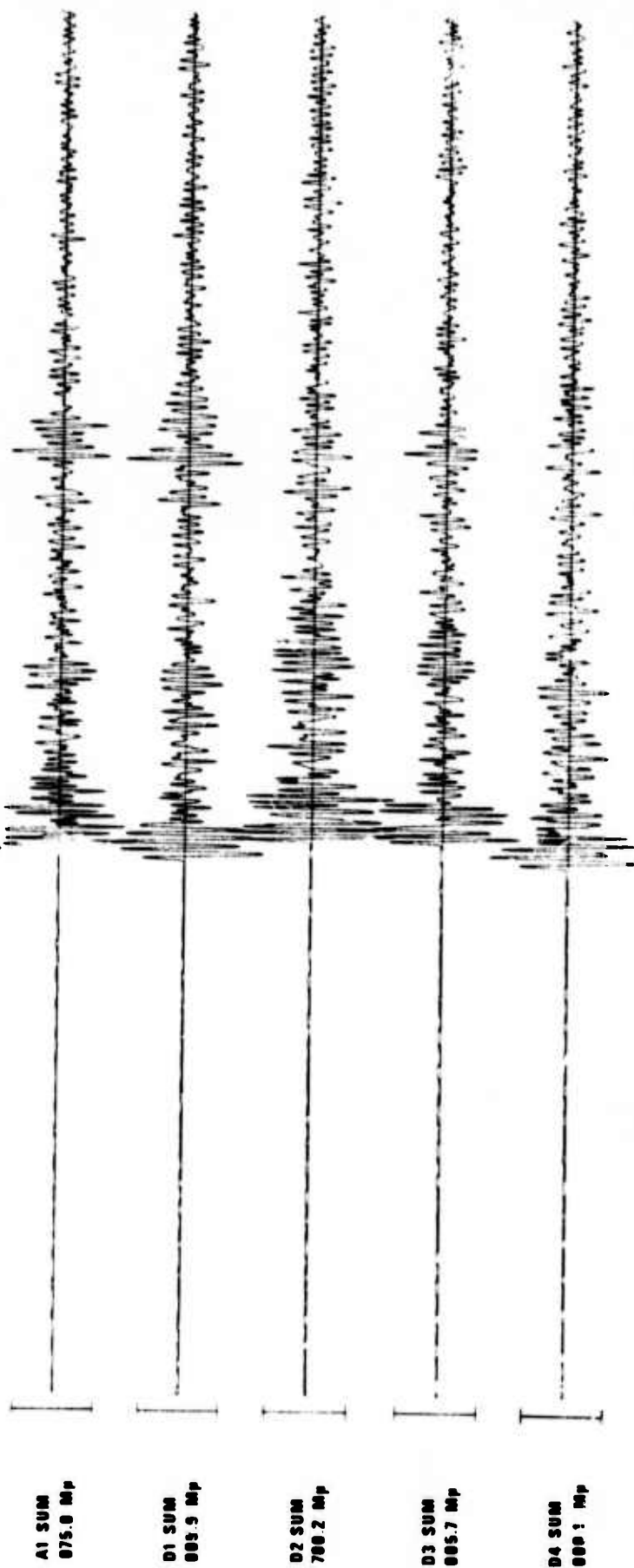


10 SEC

09:11:20

LASA INFINITE VELOCITY SUBARRAY SUMS 23 AUG 75

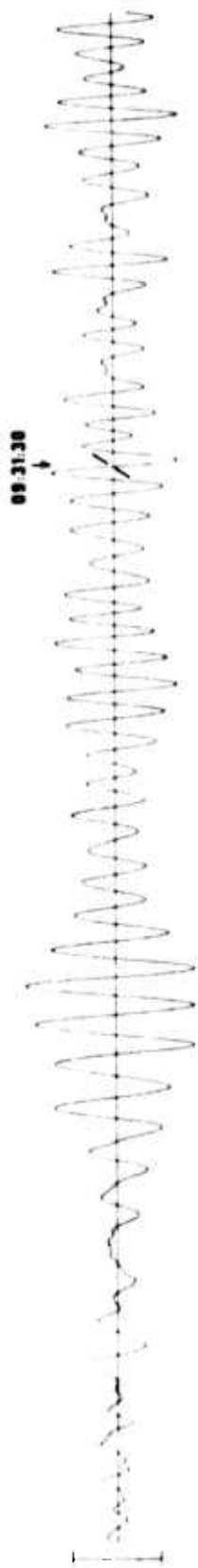
00:10:05.2



20 SEC

WH2YK 23 AUG 75

LPT
320.82 MHz



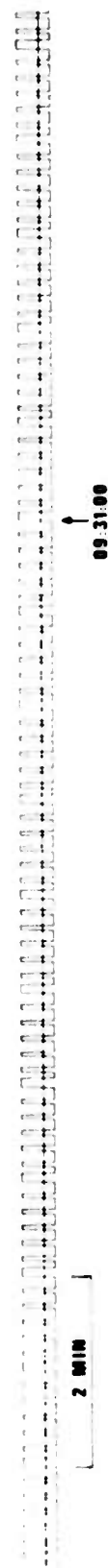
LPT
102.85 MHz



LPT
200.75 MHz



TIME



HN-ME 23 AUG 75

09:35:10

LPT
092.22 MHz



LPT
UNKNOWN



LPT
UNKNOWN



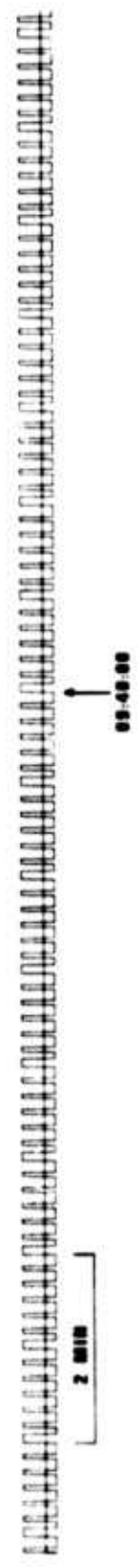
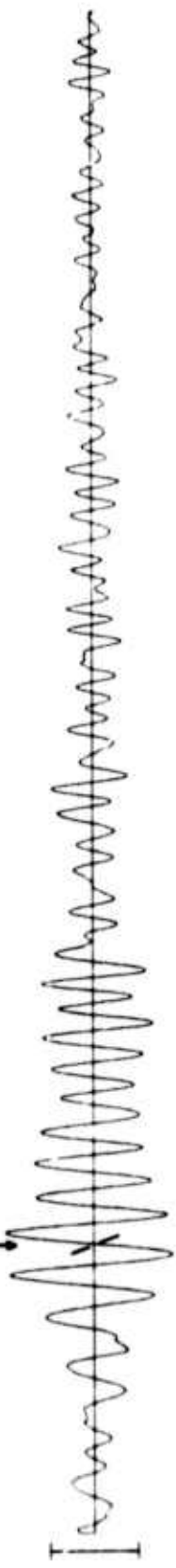
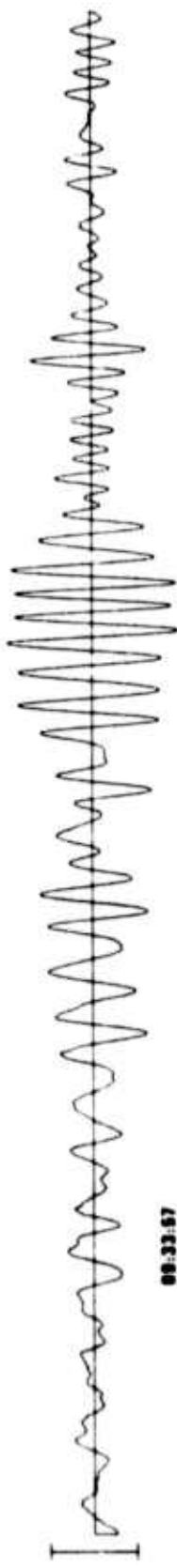
TIME

2 MIN

CALIBRATIONS UNRELIABLE

09:35:00

FN-WV 23 AUG 75



CP-S0 23 AUG 75

LPZ
707.30 MP

99-42-29

LPR
407.90 MP

99-38-41

LPT
201.75 MP

TIME

2 MIN

99-40-00

NORSAR LONG-PERIOD VERTICAL BEAM 23 AUG 75

LP VERTICAL

20220.07 MP

09:16:04

09:05:30

1 MIN

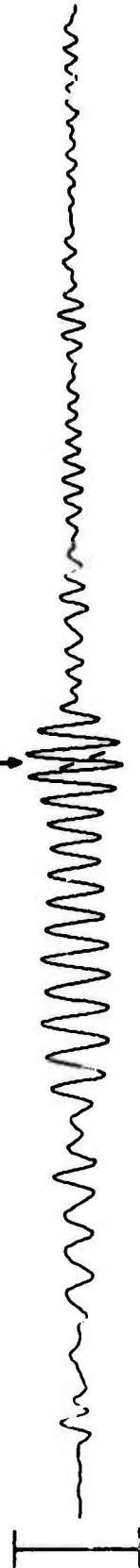


ALPHA LONG-PERIOD BEAMS 23 AUG 75

09:28:35

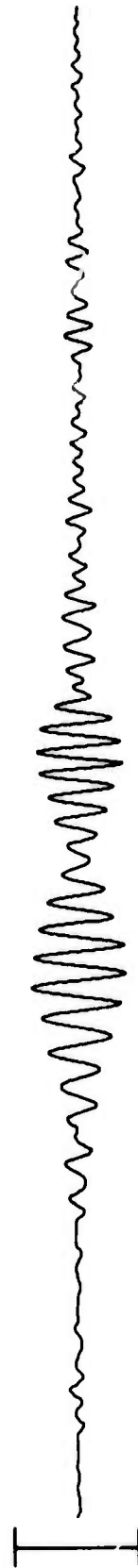
LP VERTICAL

554.64 MP



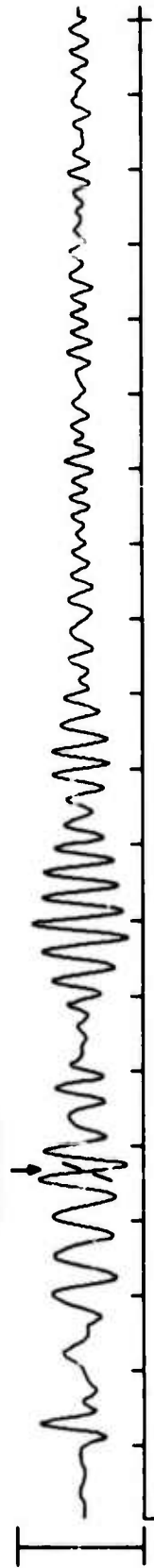
LP RADIAL

1028.60 MP



LP TRANSVERSE

646.03 MP



09:20:38

09:16:02

1 MIN